ABSTRACT

There are provided an acyloxyacetic acid polymer which is capable of more readily synthesizing acyloxyacetic acid or glycolic acid, esters of these acids, and glycolides even under more moderate conditions in an economical manner, and can be used as a biodegradable polymer. The acyloxyacetic acid polymer of the present invention is represented by the general formula (1):

$$R_{3}^{1}CCO - \left(OCH_{2}CO\right)_{n}^{-}OR^{2}$$
 (1)

wherein R¹ and R² are each independently a hydrogen atom or a linear or branched lower alkyl group; and n is an integer of not less than 5. In the preferred embodiment of the present invention, the acyloxyacetic acid polymer is produced by reacting a formaldehyde compound, carbon monoxide, and an organocarboxylic acid or a derivative thereof, with each other in the presence of an acid catalyst.